AMENDMENTS TO THE SPECIFICATION:

Please delete the heading "DESCRIPTION" on page 1, line 1.

On page 1, line 5, insert --FIELD OF THE INVENTION--.

Please replace the paragraph beginning on page 1, line 6 and ending on line 10, with the following amended paragraph:

The present invention relates to the field of reliability analysis of technical systems. ~~It proceeds from a method for quantitative estimation of the reliability of a technical system according to the preamble of claim 1.~~

On page 1, line 11, insert --BACKGROUND OF THE INVENTION--.

On page 2, line 12, insert --SUMMARY--.

Please replace the paragraph beginning on page 2, line 13 and ending on line 16, with the following amended paragraph:

The object of the present invention is to specify an improved method for estimating the reliability of a technical system. ~~This object is achieved according to the invention by means of the features of claim 1.~~

Please replace the paragraph beginning on page 3, line 22 and ending on line 24, with the following amended paragraph:

Further embodiments, advantages and applications of the invention follow from ~~the dependent claims and from~~ the description now following with the aid of the figures.

On page 3, line 25, insert --BRIEF DESCRIPTION OF THE DRAWINGS--.

On page 4, before line 1, insert --DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS--.

Please replace the paragraph beginning on page 5, line 18 and ending on page 6, line 14, with the following amended paragraph:

The model according to the invention of a widened probability distribution serves the purpose of taking appropriate account of the uncertainty in the knowledge of the expectation value of the fundamental probability distribution by widening the probability distribution. A computational example is specified below for a Poisson distribution. It may be assumed as known from operational experience or the like that a system component has a total of n_{stat} failures during one observation period t_{stat}. A nominal expectation value of the fundamental Poisson distribution is then given by $\mu_{nom}=n_{stat}/t_{stat}*T$, where T=time interval for the risk analysis or operating period of the overall system. Using a confidence level of, for example, $1-\alpha=0.9$, a lower and upper limit of a confidence interval is calculated for the expectation value using the following equations (after Koslow and Uschakow, Hanbuch zur Berechnung der Zuverlässigkeit für Ingenieure, [Engineer's manual for calculating reliability], page 426 (1979)): $\mu_{low}=n_{low}/t_{stat}*T$, $\mu_{up}=n_{up}/t_{stat}*T$, where $n_{low}=0.5*\chi^2[\alpha/2](2n_{stat})$ and $n_{up}=0.5*\chi^2[1-\alpha/2](2n_{stat}+2)$, where $\cancel{\chi^2[\ldots](\ldots)}$ $\underline{\chi^2[1-\alpha/2](2n_{stat}+2)}$ denote the (tabulated) χ^2 quantiles. In a departure from a customary χ^2 distribution, the factors 2 and 0.5 are determined by the Poisson distribution. The Poisson distributions with the expectation values μ_{low}, μ_{nom} are added to the weighting factors 0.1; 0.8 and 0.1, and thus resulting in widening. According to the invention, the weighting factors for the two edge Poisson distributions are selected such that the sum of the components projecting upwards and downwards from the confidence interval (in each case, approximately half of the edge distributions) are

exactly equal to the confidence level itself. The calculation of the Poisson widening is thereby largely self-consistent.

Please delete page 9 in its entirety.

Please replace the Abstract with the following amended Abstract:

~~The present invention relates to a~~ A method for quantitative estimation of the reliability of a technical system~~, which is useful, in particular,~~ for complex systems with a multiplicity of components. First, second and third failure rates are distinguished for the system components. ~~In accordance with the invention, an~~ An upper, lower and, if appropriate, mean value are in each case estimated for the largely unknown second failure rates by subjective expert opinion, and all upper, lower and, if appropriate, a mean probability distribution ~~(2, 3)~~ and, if appropriate, a mean probability distribution ~~(1)~~ of the system reliability. Systematic correlations between expert estimates are thereby taken into account. For the first failure rates, mean values obtained from operational experience are determined with a confidence interval, and widened Poisson distributions are calculated. Furthermore, it is possible to add to the overall probability of the system reliability the Poisson distribution of third types of fault whose failure rates are known a priori or with a high statistical reliability. ~~The method is suitable, in particular, for use in connection with FMEA ("Failure/Fault Modes and Effects Analysis") tables (4) and FMECA ("Failure/Fault Modes, Effects and Criticality Analysis") tables (4).~~

~~(Figure 1)~~